

AMENDMENT TO THE CLAIMS:

Kindly amend claims 1-10, and add new claims 12 and 13 as follows. The present listing of claims replaces all prior versions, and listings, of claims in the instant application.

Listing of Claims:

1. (Currently amended) ~~A~~The architecture of a parallel computer system having architecture of a parallel computer, comprising:

a CPU module;

a plurality of memory modules, each ~~of which~~ having a processor and RAM core; and

a plurality of sets of buses that make (a) connections between ~~the said~~ CPU module and memory modules ~~or~~ and (b) ~~or~~ connections among memory modules, ~~or that make (a) and (b), wherein the processors of the plurality of various memory modules operate on an instruction given by the CPU module to the processors of the various memory modules, and wherein~~

said architecture of a parallel computer is constituted such that: a series of data having a stipulated relationship is given a space ID and the processor of each memory module manages a table that contains at least said space ID, the logical address of ~~a~~ the portion of the series of data ~~managed that it manages itself~~, the size of said portion and the size of the series of data, and,

the processor of each memory module determines if the portion of the series of data ~~that managed it manages itself~~ is involved in a received instruction, reads data stored in the RAM core and sends ~~data~~ it out on a bus, writes data given via the bus to

the RAM core, performs (c) the necessary processing on the data, ~~or and/or~~ (d) updates said table, or performs (c) and (d).

2. (Currently amended) The computer ~~system architecture~~ according to claim 1, wherein

said processor has:

a space comparator that compares the space ID given by the CPU against the space ID of one or more series of data managed; that it manages itself;

an address comparator that compares the logical address given by the CPU against the logical address of the portion of the data managed; that it manages itself; and

an address calculator that calculates the physical address in a respective its own RAM cell based on said logical address.

3. (Currently amended) The computer ~~system architecture~~ according to claim 1, wherein

each of said memory modules receives a synchronization signal for achieving synchronization with the CPU module and other memory modules, and

each of said memory modules further it is constituted such that it comprises input that is connectable to any of said plurality of sets of buses, and output that is connectable to any other of said plurality of sets of buses, and at least, each of said memory modules it is able to output data according to said synchronization signal by connecting the input to one of said buses, inputting data and connecting the output to any of said other buses.

4. (Currently amended) The computer systemarchitecture according to claim 3, wherein

switches are provided on each of said sets of buses, thereby controlling (e) the connections between said CPU module and the input or output of any of the memory modules; ~~or~~ and/or controlling (f) connections between the input and output of one memory module and the output and input of another memory module, or controlling (e) and (f), and

by switching said switches, the exchange of parallel data is achieved in each of said sets of buses.

5. (Currently amended) The computer systemarchitecture according to claim 4, wherein the output of one memory module is connected to the input of another memory module via a first bus which is one of said plurality of sets of buses, and the output of said other memory module is connected to the input of still another memory module via a second bus which is another one of said plurality of sets of buses; ~~so that the~~ exchange of data over the first bus proceeds in parallel with the exchange of data over the second bus.

6. (Currently amended) The computer systemarchitecture according to claim 5, wherein the connections between said bus and memory module are repeated to form multi-stage connections among memory modules.

7. (Currently amended) The computer systemarchitecture according to claim 1, wherein, when said processor receives an instruction to delete a specific element within

a series of data, insert a specific element into said series of data, or add a specific element to the end of a series of data, said processor performs a table lookup, compares the region of data managed~~that it manages itself~~ against the position of said element subject to deletion, insertion or addition, and based on the results of said comparison, updates the content of said table.

8. (Currently amended) The computer system architecture according to claim 1, wherein, in response to a given instruction, said processor (e) converts subscripts for specifying elements within a series of data, or and (f)~~or~~ executes value conversion for giving a specific modification to elements, or said processor performs (e) and (f).

9. (Currently amended) An information processing unit comprising:

a CPU module;

a plurality of memory modules, each ~~of which~~ having a processor and RAM core; and

a plurality of sets of buses that make (a) connections between the said CPU module and memory modules or and (b)~~or~~ connections among memory modules, or that make (a) and (b), wherein the processors of the plurality of various memory modules operate on an instruction given by the CPU module to the processors of the ~~various memory modules~~, and wherein

said information processing unit has architecture of a parallel computer is constituted such that: a series of data having a stipulated relationship is given a space ID and the processor of each memory module manages a table that contains at least said

space ID, the logical address of ~~the~~ portion of the series of data managed~~that it manages itself~~, the size of said portion and the size of the series of data, and,

the processor of each memory module determines if the portion of the series of data managed~~that it manages itself~~ is involved in a received instruction, reads data stored in the RAM core and sends data~~it~~ out on a bus, writes data given via the bus to the RAM core, performs (c) the necessary processing on the data, ~~or~~ and (d) ~~or~~ updates said table, ~~or performs (c) and (d)~~.

10. (Currently Amended) The information processing unit according to claim 9, wherein said CPU module is constituted ~~to such that it can be linked~~ to another bus that connects legacy memory, input devices and display devices to each other.

11. (Original) A computer system comprising the information processing unit according to claim 9 and one or more storage devices including legacy memory, input devices and display devices linked to the CPU module via another bus.

12. (NEW) The computer system according to claim 1, wherein the plurality of sets of buses are connected in parallel to the CPU module and to each memory module.

13. (NEW) The computer system according to claim 9, wherein the plurality of sets of buses are connected in parallel to the CPU module and to each memory module.